

asserts that material wealth is necessarily associated with the decadence of intellectual vigour, or of the sense of moral responsibility. What the Roman poet said of the Augustan time, 'Aetas parentum pejor avis tulit nos nequiores, mox daturos progeniem vitiosorem,' cannot with truth be said of our age and country. . . .

"Our funds will of necessity be limited at first, and it will hardly be in our power for some time to come to procure for our subscribers regular courses of lectures either in literature or science. Nor, indeed, do I think that the ordinary popular lectures are on the whole of any permanent value beyond the intellectual excitement which they produce. Their tendency in too many instances is rather to discourage than to promote study. When we have witnessed the brilliant experiments and listened to the luminous expositions of a Tyndall on light or magnetism, we are too apt to imagine we have carried away the solid instruction in those sciences which is in fact only to be acquired by close and persevering application. And this applies equally to literature, as those amongst us who were charmed by the acute criticism and pungent satire of Thackeray in his day will scarcely fail to admit. I believe that we should do more good by having, in each of our sessions, one or two lectures by eminent men, setting forth the objects and boundaries of some great branch of literature or of science, and the best method of cultivating it. Such lectures would do as much as popular courses to awaken the interest of those hitherto unacquainted with the subject treated, and would stimulate them to private study; whilst they would be of greater value to those who have already some familiarity with it by enabling them to keep abreast of the most advanced knowledge of the day and directing them to lines of inquiry by following which they themselves may possibly extend its boundaries. . . .

"As an example of how little the theory of force is apprehended even in its most rudimentary form, by persons who have received a liberal education, I may mention the case of a landowner and member of one of the learned professions, who not long since consulted me about his barn machinery. He suggested water as the motive power, and, when I asked him how he would obtain the necessary fall, gravely proposed to raise the water from a canal at the foot of his homestead, by the very machinery which that water was to set in motion.

"It is probable that one or more of our distinguished members, on whose support we have to congratulate ourselves, will have the kindness to give us instruction of the highest grade in their special subjects; but there is probably not one of us who could not, by working steadily at some subject in which he takes an interest, and by a simple relation of the result of his studies and observations, contribute to our entertainment as well as add to our knowledge. It is one of the advantages of residence in the country, that it affords so many opportunities for the study of the natural history of animated life. The example of Sir John Lubbock's exquisite monograph on the fructification of flowers, composed in his leisure moments by a man immersed in public and private business, as well as occupied by the special pursuits to which he owes his scientific reputation, shows how much may be done in this way. . . .

"Our holiday tours also, whether at home or abroad, if we note carefully and relate simply what we have seen, will give us endless subjects for papers on ethnology, social and political economy, and archæology. . . .

"The establishment of a Museum is one of the objects contemplated by the gentlemen to whom we are indebted for the existence of our society, and there can be no doubt of the value of such an institution, even if it should not attempt anything beyond the collection of miscellaneous objects illustrative of natural history, and of that of our race and country. I remember well that when I was a child, the sight of a provincial collection of armour, of

coins, and of other objects of daily use belonging to a period so recent as that of the Commonwealth and the Restoration, first enabled me to form a conception of history as of a reality instead of a dream."

THE EDINBURGH BOTANICAL SOCIETY*

THE Botanical Society of Edinburgh numbers more than 500 members. Moreover, the Botanical Class of the University of Edinburgh is the largest in the three kingdoms; the number of pupils which attended it in the year 1874 was 354. We might reasonably expect, therefore, to find in the "Transactions" of the Society some evidence of the existence, in an environment apparently so favourable, of a flourishing school of botanical investigation. After, however, examining the present number with some care, it is impossible to avoid feeling considerable disappointment. To speak the truth, a great part of its contents might have been sufficiently gratifying to those concerned if printed in some local periodical, but they are quite unworthy of that more formal and wider circulation which they necessarily aim at by their present mode of publication. The valedictory address of the president, Mr. J. M'Nab, is mainly occupied with a discussion (but *apart* from any meteorological data) of the deterioration of the climate of Scotland, which it is well known he believes to have taken place. Amongst other facts which he adduces in support of it, is the present scarcity in Scotland of mushrooms! He takes occasion to point out that though the British climate is unsuitable for many plants such as *Rhododendron arboreum*, their hybridised descendants are able to represent them in our gardens. It is, however, by no means certain that *Bryanthus erectus* is, as the president stated, a hybrid between *Menziesia empetrifolia* and *Rhodothamnus chamaecistus*; on the contrary, it appears to be identical with a form of the former species.—Mr. A. S. Wilson continues his remarks on *Lolium temulentum*, the seeds of which have long been believed to be poisonous, and an exception to the general rule amongst grasses. The poisonous qualities of *Lolium temulentum* are attributed, no doubt correctly, to the ergot, with which it is often infected. After separating the ergotised grains, Mr. Wilson made cakes of darnel meal, which he ate without experiencing any ill effects. It is mentioned *inter alia* (p. 49) that the first Swedish turnips raised in Britain were grown at Perth, in 1772, from seed sent by Linnaeus. Rather unexpectedly in a botanical publication we come further on upon an account of a dredging expedition, headed by Prof. Carus, in Lamlash Bay.—Mr. J. F. Duthie gives a long account of botanical excursions near the Baths of Lucca; except as an extract from the journal of an ardent collecting botanist, it has no points of interest.

Mr. A. S. Wilson writes on the fertilisation of cereals, in which he holds, against most authorities, that wheat, barley, and oats are not wind-fertilised, but are self-fertilised before the anthers are expanded. In rye, on the other hand, his experiments led him to the belief that 56 per cent. of the florets are fertilised by the agency of the wind. There are some things in his paper to which exception might be taken. Thus (p. 95), speaking of the embryo (ovule?) of rye, he says it "may more properly be regarded as a cellular mass capable of evolving fifty embryos, one of which takes the lead in the ovary," &c. Mr. M'Nab, in a paper on "Climatal Changes in Scotland," reiterates his view already alluded to; while the annual temperature remains the same, he believes the summers to be cooler.

Dr. Stewart's list of the principal trees and shrubs of Northern India takes up nearly forty pages. It is a posthumous publication, and its precise usefulness is by

* Transactions and Proceedings of the Botanical Society of Edinburgh vol. xii. part 1.

no means clear. Brandis's "Forest Flora of North-west and Central India" is an admirable and scholarly book. With the preparation of this Dr. Stewart was at first associated, and the present list is apparently a rough draft of the ground intended to be covered by the more elaborate work. After testing Dr. Stewart's list in several places, it is clearly evident that it is a mere compilation of no value whatever, critical or otherwise. One example out of many will suffice: *Hopea floribunda*, Wall., is identified with *Shorea robusta*, the well-known *Sal.* A. De Candolle fell into this error; but seeing that Wallich's specimens are in London, Dr. Stewart might easily have avoided following him. The confusion in Indian botany is already sufficiently deplorable without importing fresh mystifications.

Mr. Etheridge, jun., F.G.S., contributes a notice of some newly discovered specimens of *Pothocites*, a carboniferous fossil which has been held to represent the oldest known angiospermous Phanerogam. A note on the Chinese *Lan-hwa* makes Prof. Balfour by some error speak of *Olea fragrans* as belonging to the *Orchidaceæ*. The remainder of the matter filling the 188 pages of this part contains nothing else worth noting.

THE RECENT STORMS IN THE ATLANTIC

IN reference to the suggestion contained in the last number of NATURE, p. 290, we notice in the *Times* of the 13th inst. the following telegram:—

"New York, Feb. 12.—In consequence of the continuance of intensely cold weather, the East River is totally blocked with ice, and the shipping on the Hudson River is seriously impeded. In all parts of the States travelling is almost suspended, and the present condition of things is without parallel in the history of the last forty years."

The cold weather appears to have set in during the Christmas week, and not to have abated in the end of January and the first days of February, when we in Western Europe were brought under the influence of the polar wind. It remains to be seen whether the gales abated in the Atlantic when both sides were brought under similar conditions. We find in one of the most recent numbers of the *New York Herald* a list of the several years in which the freezing of the East River occurred at New York. Our contemporary notes,—January 19, 1792; January 8, 1797; January 19, 1821; January 21, 1852; January 1854; January 8, 1856; January 17, 1857; January 23, 1867; February 1871.

It cannot be said that each of these years was cold in Europe as well as in the States; so that it may be asserted with some degree of probability that the freezing of the East River in New York, and the freezing of the Seine or the Thames, are not regulated by the same laws. Without going deeply into the matter we can say, *exempli gratia*, that in 1821 the first part of the winter was cold in Europe, but that the weather was milder among us when the East River was frozen. On the contrary, the whole of the winter in 1853–1854 was rather cold in our temperate regions. In 1857 the freezing of the East River occurred when the winter was beginning to get colder in Europe. But in 1871, the cold disastrous winter which helped so much the German armies was over, and February was rather mild, when the East River was bridged over by coalescing icebergs. Consequently the only point which can be easily settled is to ascertain whether differences of temperature between America and Europe are an indication of the existence of gales raging in mid-ocean. The interest of the suggestion is independent of the origin of the inequality of temperatures, which can be attributed to many different causes, but would take too long to enumerate, and which would lead to no immediate practical conclusion.

W. DE FONVIELLE

NOTES

THE British Eclipse Expedition in charge of Dr. Schuster sailed last Thursday in the Peninsular and Oriental Company's steamship *Surat*, for Galle and Singapore. Dr. Vogel, of Berlin, joins the expedition at Suez, and Dr. Janssen at Singapore. Prof. Tacchini, also a member of the expedition, is already at Calcutta. The Viceroy has chosen Camorta, in the Nicobars, and Mergui as observing stations. The English observers will proceed to Camorta, where, as Mr. Hind has already stated in NATURE, totality lasts 4m. 27s. Before the accident to the *Charybdis*, that ship had been detailed by the Admiralty for the conveyance of the observers from Singapore to Siam. The *Surat* passed Gibraltar yesterday, all well.

THE medals of the Geological Society will be awarded as follows at the anniversary meeting to be held to-morrow:—The Wollaston Medal to Prof. L. G. de Koninck, of Liège, a distinguished palæontologist, especially as regards carboniferous fossils; the balance of proceeds of the Wollaston Fund to Mr. L. C. Miall, of Leeds, who has done good work on the Labyrinthodonts; the Murchison Medal to Mr. W. J. Henwood, of Penzance, for researches in respect to mineral veins and underground temperature; and the Murchison Fund to Prof. H. G. Seeley, in aid of his researches in fossil osteology.

THE medal of the Royal Astronomical Society has been awarded this year to M. D'Arrest, for his great catalogue of Nebulæ.

CAPT. HOFFMEYER, Director of the Danish Meteorological Institute, has issued a circular in reference to his admirable Daily Weather Charts, from which it is gratifying to see that they have been well received by the meteorologists of Europe. He is resolved to continue the publication, although hitherto the subscriptions have not been sufficient to cover the outlay. In the hope, however, that the number of subscribers will more and more increase, Capt. Hoffmeyer will continue to issue the charts at the same price as heretofore; he will, moreover, issue charts embracing a larger portion of the globe than before, and giving, besides, some idea of the distribution of temperature. These changes in the charts have been adopted in accordance with the advice of the directors of various central institutions. He has rejected Mercator's projection in order to avoid the exaggerated dimensions of northern regions, and he has somewhat diminished the scale in order to be able to embrace more degrees of longitude. He has also placed beside the stations figures showing in centigrade degrees the observed temperature, without the correction for altitude. Subscriptions are received at the Meteorological Office, 116, Victoria Street, London, S.W., at the rate of 12s. 6d. per quarter, including cost of delivery. We hope that Capt. Hoffmeyer will be encouraged in his most laudable enterprise by an increased number of subscribers; it is the duty of all friends of science to do what they can to support so valuable a work.

THE tercentenary of the University of Leyden appears to have been a very brilliant affair. The delegates from other universities, to the number of over seventy, were treated with boundless distinction and hospitality. They came from Claudopolis in the east, and Coimbra in the west, and from Finland in the north. Considerable disappointment was felt at no representative being sent by Oxford, and that no notice of any kind was taken of the invitation. No doubt Oxford will be able to render a reason for this seeming uncourteous conduct. The Universities of Cambridge, Dublin, and London were all represented. It is interesting to hear that amongst the honorary degrees none was received with so much applause as that conferred on Mr. Darwin.